

## PATENT ABSTRACTS OF JAPAN

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**WATANABE HIROYUKI**(54) **PRODUCTION OF SILICA GLASS CRUCIBLE**

## (57) Abstract:

PURPOSE: To obtain, by arc spin melting, a large-diameter silica glass crucible developing no bubble production and growth in its transparent layer even under use at reduced pressures, by cooling the inner surface after arc stop with a hydrogen gas-contg. atmosphere.

CONSTITUTION: A feedstock such as high-purity synthetic silica glass powder produced by sol-gel process, synthetic cristobalite powder or highly purified natural crystal silica powder is fed into a revolving mold followed by arc heating from the inner surface, thereby forming a silica glass crucible having a transparent layer on the inner side by arc spin melting process. Immediately after arc discharge halt, hydrogen gas is injected inside the crucible to burn part of the gas, and

the crucible is cooled to 700°C with the resultant steam-contg. atmosphere containing high-temperature hydrogen gas, thus obtaining the objective crucible. It is appropriate that the hydrogen gas injection time be 1-30min.

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